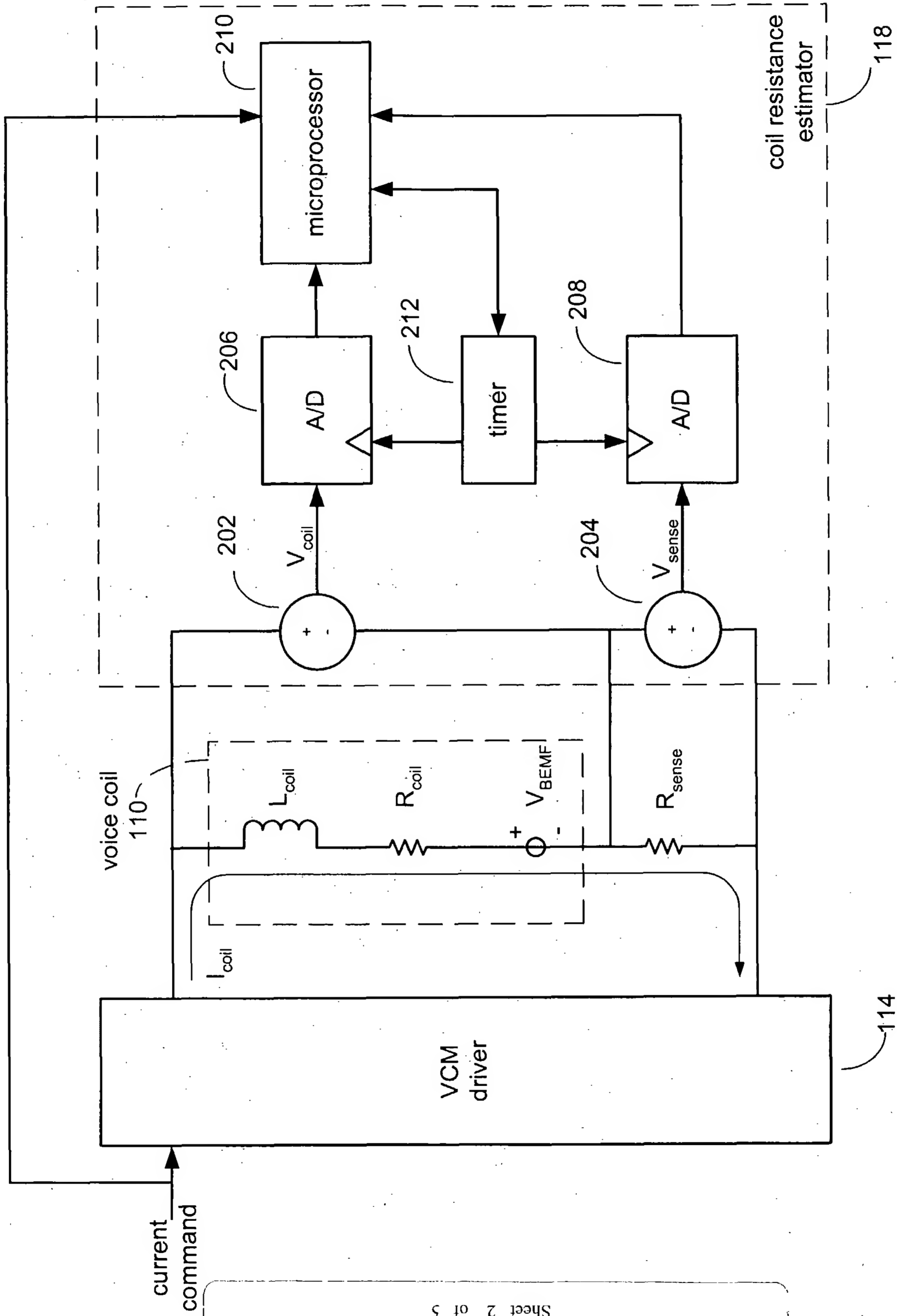


FIG. 1



current
command

voice coil
110

I_{coil}

L_{coil}

R_{coil}

V_{BEMF}

R_{sense}

VCM
driver

114

coil resistance
estimator

118

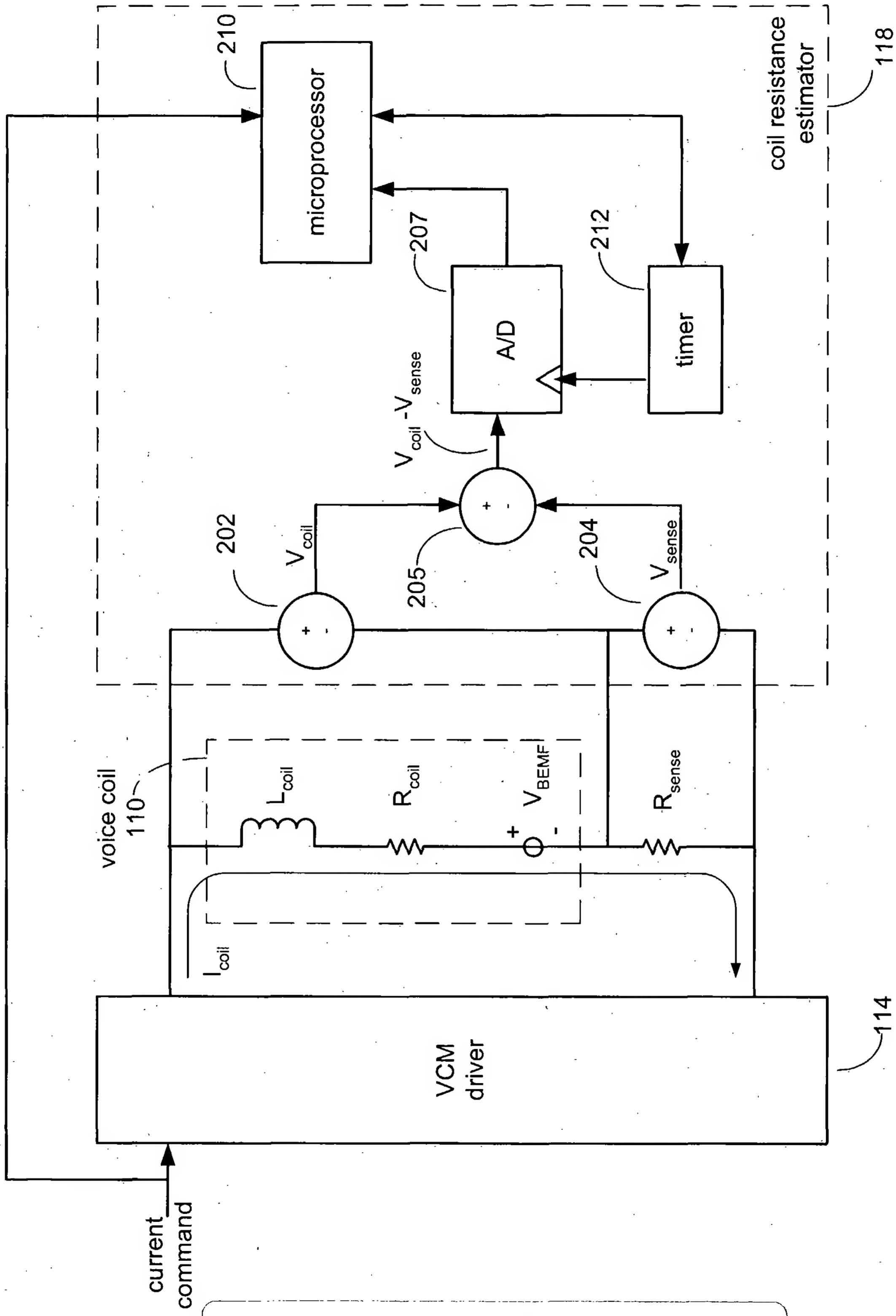


FIG. 2B

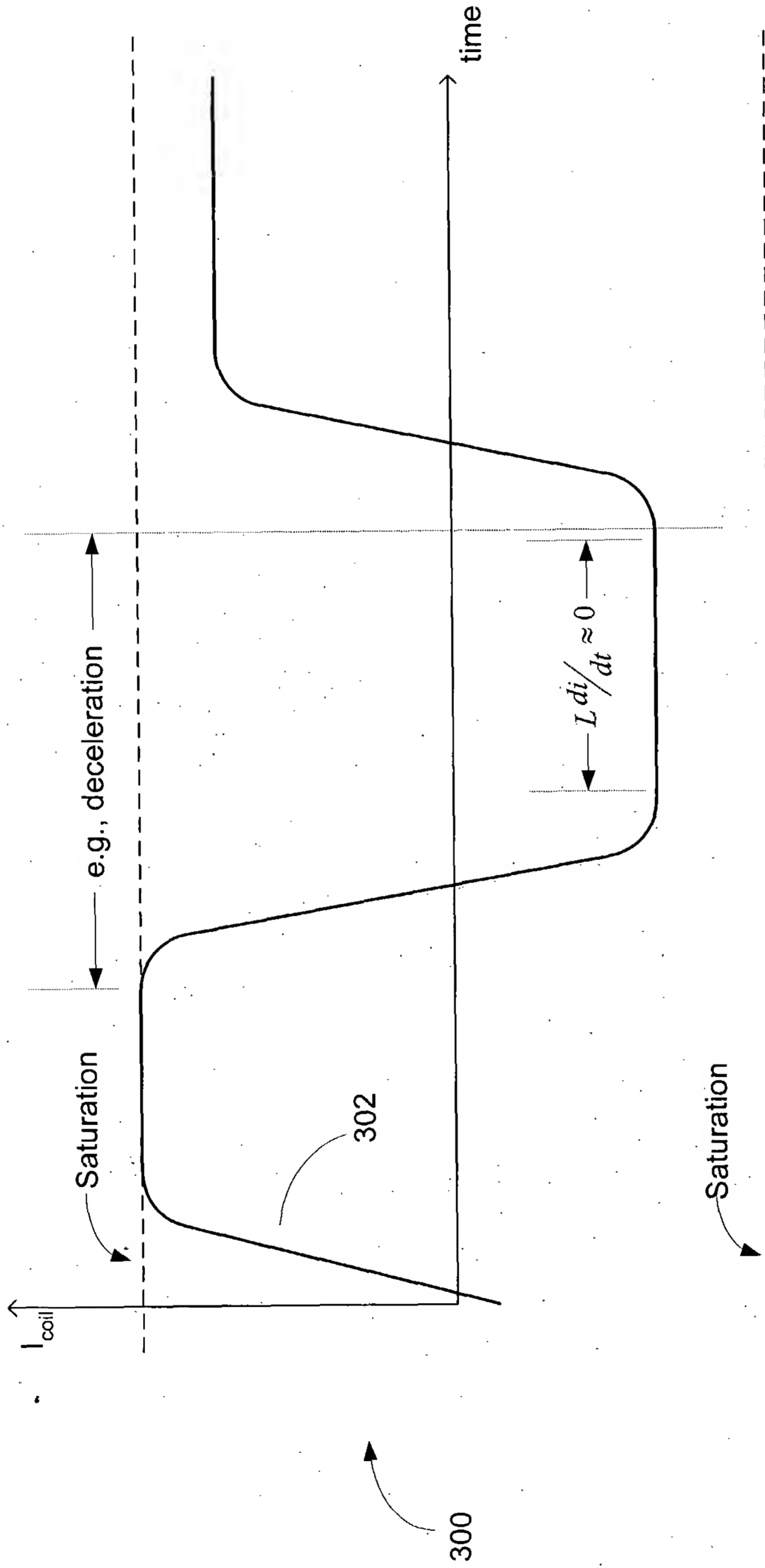


FIG. 3

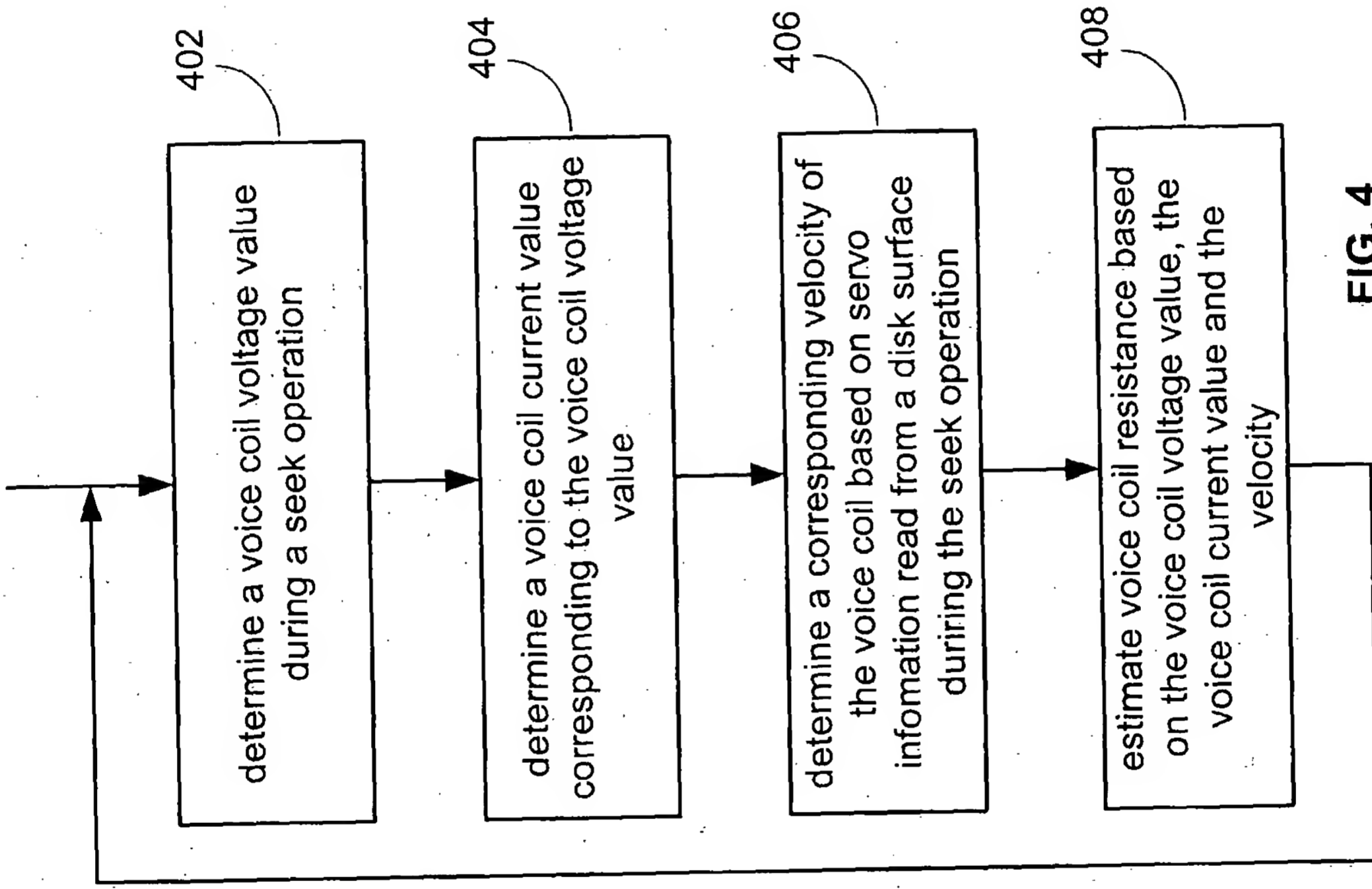


FIG. 4